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10/787,157	02/27/2004	Ji-sang Kim	1349.1365	4607

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EXAMINER

MARSH, OLIVIA MARIE

ART UNIT

PAPER NUMBER

2617

DATE MAILED: 04/05/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/787,157

Applicant(s)

KIM, JI-SANG

Examiner

Olivia Marsh

Art Unit

2617

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 27 February 2004.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-23 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1, 6 and 8-13 is/are rejected.
- 7) ☒ Claim(s) 2-5 and 14-23 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Priority

1. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. **Claim 8 is rejected under 35 U.S.C. 102(b) as being anticipated by Hasegawa (U.S. 5,995,808 A).**

As to **claim 8**, Hasegawa discloses:

An overcurrent control method for a mobile device having at least one function module (column 1, lines 9-10), the method comprising:

detecting whether a main power supply supplying power to the mobile device is cut off (column 3, lines 55-58);

converting potential levels of input/output signal lines of the function module to a predetermined potential level according to a result of the detection (column 4, lines 26-3); and

supplying a backup power to the mobile device (column 2, lines 51-54).

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4. Claims 10-12 are rejected under 35 U.S.C. 102(b) as being anticipated by Han (U.S. 2001/0017532 A1).

As to **claim 10**, Han discloses:

A mobile device (Figure 1) having an overcurrent cutoff function and at least one function module (paragraphs 3 and 8), the mobile device comprising:

- a main power supply unit (161) which supplies power to the mobile device (paragraph 18);

- a power supply load/unload detection unit (151) which detects a separation of the main power supply unit from the mobile device (paragraph 18);

- a control unit (100) having application programs and an operating system which runs the application programs or controls the at least one function module (paragraph 17);

- a memory device (110) which stores temporary data during the execution of the application programs and data resulting from the application program executions by the control unit (paragraph 17);

- a power control unit (150) which converts the power generated from the main power supply unit into a predetermined voltage and supplies the power to the control unit and the memory device (paragraph 18); and

- a backup power supply unit (160) which supplies a backup power to the mobile device when the power from the main power supply unit to the mobile device is detached (paragraph 18).

As to **claim 11**, Han discloses everything as applied in claim 10 and Han also discloses:

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the control unit communicates data lines and control signal lines with the at least one function module (170, 171, 120, 140) (Figure 1).

As to **claim 12**, Han discloses everything as applied in claims 10-11 and Han also discloses:

when the main power supply unit is separated from the mobile device due to external impacts, the power supply load/unload detection unit detects the separation and generates a power cutoff signal to the control unit (paragraph 24).

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. **Claims 1, 6, and 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hasegawa (U.S. 5995808 A) in view of Hosoi (U.S. 2002/0039916 A1).**

As to claim 1, Hasegawa discloses to a radio selective call receiver such as a pager, reading on claimed "mobile device," and, more particularly, to one with a circuit for preventing data loss when replacing a battery (column 1, lines 9-10), reading on claimed "a mobile device having an overcurrent cutoff function," a reference numeral 14 is a booster circuit for supplying power to the decoder circuit 6, reading on claimed "one function module," and the CPU 7 (column 2, lines 49-51), reading on claimed "a least one function module." Hasegawa also discloses reference numeral 13 is a battery removal/insertion detection circuit 13 for detecting removal /insertion of the battery 19 (column 2, lines 47-49), reading on claimed "a main power supply which supplies power to the mobile device." Hasegawa also discloses when the user replaces the battery, a battery removal/insertion detection circuit 13 detects removal of the battery 19 and notifies the decoder section 6a of the removal state (column 3, lines 55-58), reading on claimed "a power detection unit which detects whether power from the main power supply to the mobile device is cut off, and generates a power cutoff signal when the power is cut off." Hasegawa also discloses a reference numeral 15 is a message protection power supply circuit for supplying backup power for a predetermined time period to protect message data stored in the RAM 5 during battery replacement (column 2, lines 51-54), reading on claimed "a

backup power supply unit which supplies a backup power to the mobile device when the power from the main power supply to the mobile device is cut off.”

Hasegawa also discloses when the user removes the battery 19, a transistor (not shown) provided in the battery removal/insertion detection circuit 13 is switched from On to Off; accordingly a signal reverses its logic from L level to H level, thus switching the power source for supplying power to the controlling circuits from the booster circuit 14 to the message protection power circuit 15 (column 4, lines 26-33). However, Hasegawa fails to disclose a control unit which communicates data lines and control signal lines with the at least one function module, and converts potential levels of the data lines and control signal lines connected to the at least one function module to a predetermined potential level in response to the power cutoff signal. The Examiner contends this feature was old and well known in the art at the time of invention as taught by Hosoi.

In an analogous art, Hosoi teaches a portable telephone apparatus which protects stored contents of an internal memory when power supply from a cell is disconnected instantaneously (paragraph 2). Hosoi also teaches if the cell cover 15 is opened, then the switch 18 is switched on, and the cell cover opening/closing detection signal 3 to be supplied to the control circuit 5 of FIG. 1 exhibits the Low level and the interruption signal 6 is transmitted from the control circuit 5 to the CPU 7 (paragraph 41), reading on claimed “a control unit which communicates data lines and control signal lines with the at least one function module, and converts potential levels of the data lines and control signal lines connected to the at least one function module to a predetermined potential level in response to the power cutoff signal.”

Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention to require the mobile device, disclosed by Hasegawa, the mobile device comprising a control unit which communicates data lines and control signal lines with the at least one

function module, and converts potential levels of the data lines and control signal lines connected to the at least one function module to a predetermined potential level in response to the power cutoff signal, as taught by Hosoi, in order to back up data when a battery is removed or completely consumed.

As to **claim 6**, Hasegawa and Hosoi teach everything as applied in claim 1 above; however, Hasegawa fails to disclose the predetermined potential level is an logic "low" or a high-impedance state. The Examiner contends this feature was old and well known in the art at the time of invention as taught by Hosoi.

Hosoi also teaches, as stated previously, the cell cover opening/closing detection signal 3 to be supplied to the control circuit 5 of FIG. 1 exhibits the Low level and the interruption signal 6 is transmitted from the control circuit 5 to the CPU 7 (paragraph 41), reading on claimed "the predetermined potential level is a logic "low" or a high-impedance state."

Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention to require the mobile device, disclosed by Hasegawa, the mobile device comprising a control unit which communicates data lines and control signal lines with the at least one function module, and converts potential levels of the data lines and control signal lines connected to the at least one function module to a predetermined potential level in response to the power cutoff signal, as taught by Hosoi, the predetermined potential level is a logic "low" or a high-impedance state, also taught by Hosoi, in order to back up data when a battery is removed or completely consumed.

As to **claim 9**, Hasegawa discloses everything as applied in claim 8; however, Hasegawa fails to disclose the predetermined potential level is an logic "low" or a high-impedance state. The Examiner contends this feature was old and well known in the art at the time of invention as taught by Hosoi.

Hosoi also teaches, as stated previously, the cell cover opening/closing detection signal 3 to be supplied to the control circuit 5 of FIG. 1 exhibits the Low level and the interruption signal 6 is transmitted from the control circuit 5 to the CPU 7 (paragraph 41), reading on claimed "the predetermined potential level is a logic "low" or a high-impedance state."

Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention to require the method and potential level, disclosed by Hasegawa, the predetermined potential level is a logic "low" or a high-impedance state, as taught by Hosoi, in order to back up data when a battery is removed or completely consumed.

7. Claim 13 is rejected under 35 U.S.C. 103(a) as being unpatentable over Han as applied to claims 10-12 above, and further in view of Hosoi (U.S. 2002/0039916 A1).

As to claim 13, Han discloses everything as applied in claims 10-12 above and Han also discloses the control section 100 switches the electric power of the wireless telephone set from the main battery 161 to the supplementary battery 160 in step 240; in other words, a switching operation of the power selecting section 151 switches the electric power path directed to the power supply section 150 to the supplementary section 160 (paragraph 24), reading on claimed "generates a backup power supply signal to enable the backup power supply unit to supply power to the mobile device." However, Han fails to disclose the control unit receives the power cutoff signal from the power supply load/unload detection unit, the control unit converts potential levels of the data lines and the control signal lines associated with the at least one function module. The Examiner contends this feature was old and well known in the art at the time of invention as taught by Hosoi.

In an analogous art, Hosoi teaches a portable telephone apparatus which protects stored contents of an internal memory when power supply from a cell is disconnected

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instantaneously (paragraph 2). Hosoi also teaches if the cell cover 15 is opened, then the switch 18 is switched on, and the cell cover opening/closing detection signal 3 to be supplied to the control circuit 5 of FIG. 1 exhibits the Low level and the interruption signal 6 is transmitted from the control circuit 5 to the CPU 7 (paragraph 41), reading on claimed "the control unit receives the power cutoff signal from the power supply load/unload detection unit, the control unit converts potential levels of the data lines and the control signal lines associated with the at least one function module."

Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention to require the mobile device, disclosed by Han, the control unit generates a backup power supply signal to enable the backup power supply unit to supply power to the mobile device, also disclosed by Han, the control unit receives the power cutoff signal from the power supply load/unload detection unit, the control unit converts potential levels of the data lines and the control signal lines associated with the at least one function module, as taught by Hosoi, to enable the mobile device to possess a DRAM, cheaper, volatile memory, to be used for storing ID information of the mobile device.

Allowable Subject Matter

8. Claims 2-57 and 14-23 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Olivia Marsh whose telephone number is 571-272-7912. The examiner can normally be reached on 8:30 AM - 5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Marsha Banks-Harold can be reached on 571-272-7905. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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